



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,380	10/27/2003	Motohiro Terao	450100-04788	5770

7590 06/30/2006

FROMMER LAWRENCE & HAUG LLP  
745 FIFTH AVENUE  
NEW YORK, NY 10151

EXAMINER

BIBBINS, LATANYA

ART UNIT PAPER NUMBER

2633

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/694,380

Applicant(s)

TERAO ET AL.

Examiner

LaTanya Bibbins

Art Unit

2633

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/24/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "substantially" in claims 1, 10, and 19 is a relative term, which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claims 7 and 16 respectively recite both an apparatus and a method where "said sequence comprises **either** a sequence of addresses of said empty areas." However, the claims fail to recite an alternative to the "sequence of addresses of said empty areas." In addition, claims 7 and 16 recite the limitations "said registering means" and "said registering step" respectively. There is insufficient antecedent basis for this limitation in the claims.

Dependent claims 2-6, 8, 9, 11-15, 17, 18, and 20 do not resolve the issues of the independent claims recited above.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 19 and 20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 19 and 20 are drawn to a “program” *per se* as recited in the preamble and as such are non-statutory subject matter. See MPEP § 2106.IV.B.1.a. Data structures not claimed as embodied in computer readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. Similarly, computer programs claimed as computer listings *per se*, i.e., the descriptions or expressions of the programs are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and

Art Unit: 2633

other claimed elements of a computer, which permit the computer program's functionality to be realized.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6, 10, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Sasaki et al. (US PGPub 2004/0013059 A1).

Claims 1 and 6 recite a recording apparatus comprising a means for determining a sequence to record input data into empty areas of a recording medium and a means for recording input data into the empty areas wherein the sequence comprises either a sequence of address or a sequence of sizes of empty areas.

The means plus function language recited in claim 1 indicates that applicant intends to invoke 35 U.S.C. 112 paragraph six. Where means plus function language is used, claim limitations are interpreted to read on only the corresponding structure disclosed in the specification and equivalents thereof. The disclosed structures used for the “means for determining” and the “means for recording” are a controller and a drive respectively.

Sasaki et al. discloses a system control section implemented by a microprocessor (**see figure 2 and paragraph [0074]**) that acquires position information and allocates unallocated areas of the optical disc (**see paragraphs [0098] and [0099]**). Sasaki also discloses an optical disc drive device that records data on an optical disc (**see figure 2 and paragraph [0099]**). Sasaki further teaches a sequence of positions, or addresses, of unallocated areas of the recording medium (**see paragraphs [0117] – [0118]**).

The system control and the optical disc drive device taught in Sasaki are structural equivalents of the controller and the drive disclosed in the specification. That is, the system control and the optical disc drive device taught in the prior art are capable of performing the functions specified in the claim in the same manner as the functions are performed by the controller and the drive in the specification. Therefore, the prior art elements are deemed equivalent and the claimed limitations are met by the prior art.

Claims 10 and 15 are drawn to the method of using the corresponding apparatus claimed in claims 1 and 6 respectively. Therefore method claims 10 and 15, corresponding to apparatus claims 1 and 6, are rejected for the same reasons of anticipation as used above.

#### ***Allowable Subject Matter***

Claims 2-5, 8, 9, 11-14, 17, and 18 teach a recording apparatus and method comprising the following:

- A means for registering empty areas of a recording medium in a first queue before data is recorded into the empty areas, deleting empty areas from the first queue once data has been recorded in the empty areas, and registering empty areas from which data has been deleted in a second queue.
- A means for moving registered empty areas from a second queue to an empty first queue, while keeping the sequence of empty areas.
- A recording means that records data into empty areas registered in the first queue according to a sequence and records both the first and second queue onto the recording medium.
- A means for determining a sequence to record data in empty areas registered in a first queue.
- A means for reading the first queue, second queue, and positional information from the recording medium.
- A means to record positional information onto a recording medium
- A means for registering empty areas of a recording medium in a first queue or a second queue based on a relationship between the positions of empty areas read by the reading means.

The limitations recited in claims 2-5, 8,9, 11-14, 17, and 18 are neither taught nor an obvious variation of the prior art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Bibbins whose telephone number is (571) 270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shanon Foley can be reached on 571 272-0898. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
LaTanya Bibbins  
Patent Examiner

  
Shanon A. Foley  
Supervisory Patent Examiner